

Claims

1. A method for data transmission, the method comprising the steps of:
 - receiving a first bad frame a first plurality of times;
 - 5 sending a first number of Acknowledgments (ACKs) or Negative Acknowledgments (NAKs) in response to the received first bad frames;
 - declaring the first bad frame an aborted frame;
 - receiving a second bad frame a second plurality of times;
 - sending a second number of ACKs or NAKs in response to the received
 - 10 second bad frames, wherein the first and the second number of ACKs or NAKs differ; and
 - declaring the second bad frame an aborted frame.
2. The method of claim 1 wherein the step of receiving the first bad frame
- 15 comprises the step of receiving a first Radio Link Protocol (RLP) frame.
3. The method of claim 1 wherein the step of declaring the first bad frame an aborted frame comprises the step of declaring the first bad frame an aborted frame only after sending the first number ACKs or NAKs in response to the first bad
- 20 frame.

4. A method for data transmission, the method comprising the steps of:
receiving an acknowledgment (ACK) or negative acknowledgment (NAK);
- 5 determining a loss ratio (L) based on the received ACK/NAK;
comparing the loss ratio with a target loss ratio (T); and
adjusting a retransmission parameter (R) based on the comparison,
wherein the retransmission parameter comprises a number of times a particular
frame is to be retransmitted prior to aborting the frame.
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5. The method claim 4 wherein the step of adjusting R comprises the steps of
increasing R when $L > T$, and decreasing R when $L < T$ and $R > 0$.
6. The method of claim 4 wherein the step of comparing the loss ratio with the
15 target loss ratio comprises the step of comparing the loss ratio with a user
specified loss ratio.

7. An apparatus comprising:

a loss ratio generator having an ACK or NAK as an input and outputting an estimated channel loss (L); and

5 a retransmission parameter generator having the estimated channel loss as an input and outputting a retransmission parameter (R) based on the estimated channel loss, wherein R comprises a number of retransmissions a frame undergoes prior to declaring the frame an aborted frame.

10 8. The apparatus of claim 7 wherein the retransmission parameter generator additionally has a target loss ratio (T) as an input and outputs R based additionally on T.

9. The apparatus of claim 8 wherein T is a user-specified value.

15 10. The apparatus of claim 7 wherein

$$L = \frac{\text{Number of poor frames received in last 10 seconds}}{\text{Total number of frames transmitted in last 10 seconds}}.$$

20 11. The apparatus of claim 7 wherein if

$L > T$ then R is increased,

$L < T$ and $R > 0$ then R is decreased,

$L \sim T$ then R is unchanged.

25 12. The apparatus of claim 7 further comprising a frame dropper selectively dropping frames to maintain a targeted loss ratio (T).

13. An apparatus comprising:
- a receiver having a poor frame as an input;
 - an ACK/NAK generator coupled to the receiver, the receiver outputting an
- 5 ACK/NAK based on a targeted loss ratio (T), an actual channel loss ratio (L), and a retransmission parameter (R), wherein the retransmission parameter comprises a number of times a frame is ACK/NAKed prior to declaring the frame an aborted frame.
- 10 14. The apparatus of claim 13 wherein the actual channel loss ratio is calculated by a transmitter transmitting the poor frame to the receiver.